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AUTHOR Knight, Michael E.
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ABSTRACT

Five hundred twenty-six second through sixth graders were identified as needing supplementary reading instruction, their specific needs were diagnosed, and intensive prescriptive instruction was provided. A lab oriented learning center environment was prescribed which included a listening/viewing center, a decoding center, a game center, a library center, and writing centers. The program was evaluated qualitatively through observation using a rating scale. Quantitative evaluation was accomplished with a pre/posttest design using the Stanford Diagnostic Test. Examination of rating scale data indicates a profile of successful implementation. The vast majority of ratings were in the "very good" and "excellent" categories, with no program characteristics rated as "poor" or "very poor." Pre and posttest means indicate gains in mean grade equivalent achievement at all grade levels. At each grade level the actual posttest mean was higher than the predicted posttest mean. Evaluators found no weaknesses in the program. (MK)

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FINAL EVALUATION REPORT

1978-79
District: 31

Project Title: Diagnostic/Prescriptive Reading Program

Source of Funding: ESEA Title I Budget Code/Project No. 5095-91622

Prepared by: Dr. Michael E. Knight

"Official Copy of this Evaluation, Approved as Corrected by the Community School Board President and/or the Community Superintendent, District 31 on October 19 ,1979."

Louis DeSario
Community Superintendent #31

Angelo J. Aponte
Angelo J. Aponte
Chairman C.S.B. #31

USD 20570

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Evaluation of Diagnostic/Prescriptive Reading Program

Community School District 31, New York City

1978-79 School Year

FINAL REPORT

Function No. 50-9591622

Prepared by: Dr. Michael E. Knight

I. INTRODUCTION

This program was designed to increase achievement in the various areas of reading for selected children in Grades 2, 3, 4, 5, and 6. This is the first priority established by the State Department of Education.

The six schools participating in the program were those identified in the project proposal: P.S. 14, P.S. 16, P.S. 18, P.S. 31, P.S. 44, and P.S. 57. The target population of the intervention was those pupils identified as retarded readers.

Table I provides the distribution of participants by grade levels. A diagnostic/prescriptive approach was designed and implemented as the basic methodology of the program. The approach consisted of a careful diagnosis of individual needs, preparation of pupil profiles of needs, and planning and implementation of an intensive, systematic prescriptive program to remediate these deficiencies.

TABLE I

Enrollment in the Diagnostic/Prescriptive Reading Program

Grade	Enrollment
2	145
3	124
4	132
5	101
6	24
TOTAL	526

The instructional design was essentially one which identified pupils in need of supplementary reading instruction; diagnosed their specific needs, and

provided intensive prescriptive instruction in line with an individual profile of diagnosed needs. This instruction was in addition to the basic tax levy program in each school.

Participants in groups of 8 to 10 received intensive corrective instruction (prescriptive teaching) in basic skills as well as related areas of language arts that contribute toward reading improvement and the development of desirable attitudes toward reading.

The design prescribed a learning center environment which is lab oriented. This included a listening/viewing center, a decoding center, a game center, a library center, and writing centers.

II. EVALUATION DESIGN

The objectives of this program were to improve reading skills and provide each participant with a specific remediation plan for diagnosed needs. The qualitative evaluation was provided through observations using a rating scale designed to assess the effectiveness of implementation of the proposal. A sample of the rating scale is provided in Section IV.

The primary quantitative objective of this program was to demonstrate a statistically significant difference between the actual posttest score and the predicted posttest score using Correlated "t" Tests. The pretests were the pupils Stanford Diagnostic Test scores from October 1978 and the posttests are their scores on the Stanford Diagnostic Reading Test administered in May 1979. The sample consisted of all students who completed both the pretest and the posttest.

III. PROGRAM IMPLEMENTATION

Staffing

All positions allocated for this program were filled with appropriately qualified personnel. There were two teachers and two educational assistants at three of the schools and one teacher and one educational assistant at the remaining three schools at the start of the program. A second teacher and educational assistant were added at P.S. 16 on February 1, 1979.

The District Reading Coordinator, in addition to planning the Title I Program had overall responsibility for coordinating reading programs in District 31. This is a tax levy position. Specific responsibilities for this program included: conferencing with building principals re: implementation of program at school site; defining for staff the philosophy, rationales and origin of program; providing copies of program to principals, staff members, etc.; orientation of staff - PRT, EAS, classroom teachers; pre-service and in-service training; ordering of supplies and equipment; conducting meetings and workshops of personnel for professional training review of problems, practice, etc.; training classroom teachers to use various diagnostic tools to assess pupils reading skills and perceptive functioning and to employ new methods and materials for up-grading reading instruction in the classroom; to developing closer bond involving parents and community in understanding in the reading requirements and experiences of the children; to providing extensive oral language activities to promote growth in facility with language.

Instructional Prescriptive Reading Teachers (PRT)

The major responsibility of the Prescriptive Reading Teacher has been the

planning and implementation of an intensive instructional program for pupils at the intervention level served. The PRT had responsibility for interpretation of data on the Stanford Diagnostic Test which included: comparison of sub-test scores, evaluation of mastery/nonmastery areas, using teachers resource files to develop individual prescriptives, responsibility for the administration of other informal inventories at the initial phase of the program for screening i.e. I.T.T., implementing the prescription, and testing for mastery (Interim). The PRT provided reinforcement of skill development as per the developmental program as well as alternate instruction strategies for skill development. Each teacher had a system for directing pupils to planned specific activities. Work agreements, color coded assignments have been used. A student instructional worksheet includes skill objectives, activities (including teaching strategies employed), materials, and interim evaluation.

Teacher records for each group included: mode of recording activities, number and variety of activities prescribed, anecdotal records, group and individual profile of needs, materials inventory, records of parent interviews and conferences, individual prescriptions on Student Instructional Worksheet, pre-test scores, and interim mastery tests.

Educational Assistant

The Educational Assistant under direct direction of PRT: participated in daily and long range planning; worked with a few children, and individual child or group while the teacher worked with a large group, a few pupils or an individual child; assigned specific tasks to assist pupils in the instructional activities; alerted teacher to special individual needs noted; assisted in setting up learning environment; assisted in setting out materials for learning

centers as needed; assisted with preparation of non-commercial instructional material; assisted pupils with self-checking; assisted with follow-up on practice and reinforcement activities; helped prepare instructional materials; assisted in the initial and on-going screening procedures; participated in staff development workshops - strongly recommended.

Coordination with Classroom Teacher

Each PRT had responsibility for utilization of appropriate teaching strategies which complimented and supported the in-class developmental reading program. Regular conferences were scheduled with classroom teachers for purposes of sharing: results of diagnostic testing; needs of individual children; materials and strategies used in the classroom; and information about pupil progress. Compensatory programs which involve pupils leaving the regular classroom environment on regular basis require careful coordination in order to be effective with classroom teachers.

In order to insure the most productive use of time both in the resource room and in the classroom it was necessary that: all diagnostic information be shared; the PRT have a thorough knowledge of the in-class instructional program; the PRT and classroom teacher confer regularly; and the PRT and classroom teacher work as a team to support instructional service to disabled readers. Accordingly, the following steps were taken to foster successful operational implications: assistance was provided to classroom teachers in the implementation of an in-class diagnostic prescriptive program; classroom teachers were oriented to the design of the Title I component involving their pupils; classroom teachers were made aware that primary responsibility for instruction rests with classroom teachers; classroom teachers were consulted re: staff development needs, pupil progress, parent communication; and special workshops were arranged

with building principal for classroom teacher of pupils in the program will be conducted by the District Reading Coordinator.

Supervisory

Principals of each Title I School participating in this program had primary responsibility for the supervision, administration and instructional details for implementation of the program in each school.

Activities

Instruction occurred in specific arrangements of: pupils, individual or small group; materials, flat print, manipulative, multi-media, multi-model, self-pacing, self-directing, self-correcting, teacher made, commercially prepared; techniques: demonstration, inductive-deductive teaching; teaching strategies; in line with particular strategies employed in-class developmental reading program or alternate strategies. Typically, following instruction (individual or group) in a particular skill, area, a pupil works in one or more learning centers at appropriate activities for practice toward mastery of skill, i.e. comprehension center, library center and creative writing center. Both pre-service and in-service staff training was provided for teachers of participating pupils and educational assistants.

Participants received this specialized instruction a minimum of four times weekly which supplemented regular reading instruction in their classroom. Each session was 45 minutes which equals 180 to 225 minutes of instruction per week.

The participants/staff ratio was generally one teacher and one educational assistant for each group of eight to ten children.

Activities were tailored to meet the instructional needs of participants at various intervention levels. Particular attention was given to instruc-

tional strategies to develop pre-reading, initial and concomitant developmental reading skills. Each participant was given a thorough screening diagnosis at initial phases of program with careful recording and analysis of data for specific needed instruction (preparation of pupil profiles), and received intensive corrective instruction (prescriptive teaching) in basic skills as well as related areas of language arts that contribute toward reading improvement and the development of desirable attitudes toward reading.

Pupils were directed through the learning center according to individual pace, needs, interest. During a 45 minutes session a pupil frequently: received individual instruction; received instruction as part of a smaller group, worked individually at one or more of the skills learning centers with one of the adults available for checking, instructing, providing encouragement; practiced his own reading with feedback for self-evaluation prior to reading aloud to teacher or educational assistant; engaged in personal independent reading; participated in teacher led group discussion, re: functional reading at home; and engaged in sustained silent reading.

Diagnosis was on-going and participants were involved in their own goal setting. A major thrust fo the PRT assigrment was to complement and strengthen the regular classroom development reading program for participants.

Participants engaged in the use of practice, reinforcement and application material, following skills teaching in areas of work analysis and vocabulary development in line with individual needs.

Both teacher directed and self-directed and self-corrected activity were provided. A wide variety of multi-level materials were included.

Materials

For each level of the target population, special instructional materials, devices and equipment were provided. These were carefully selected to meet the instructional needs of participants, to encourage the utilization of a variety of approaches and techniques in line with learning modalities to stimulate interest in reading, and to encourage reading for pleasure, and to help provide a child-centered learning environment conducive to individual and group activities in line with assessment needs.

At the centers, assistance was provided as pupils worked on their individual prescriptions. Pupils were responsible for much of their own record keeping in grades 3, 4, and 5. On-going records for each participating pupil in this program included: personal data (to be shared with classroom teacher); data from standardized and informal achievement and diagnostic inventories; group profile of skill needs revised in 1978; interest inventory; individual prescriptions on a revised Student Instructional Plan, worksheets, pupil record keeping, books, work agreements, etc.; on-going evaluations, and samples of pupils work.

Changes in the Program

There were no changes in the basic design of the program.

Problems Involved in Program Implementation

Materials and equipment were available at the start of the program and the staff involved in this project possessed impressive backgrounds in the field of reading. For these reasons, and the administrative support and guidance they received, there were no identified problems involved in program implementation.

IV. PROGRAM EFFECTIVENESS

Process Evaluation

A qualitative evaluation of program processes was accomplished through the use of a rating scale completed during observations of the program. The distribution of ratings assigned are presented in Table II. These ratings were based on observations of 52 complete classroom periods, with each school being visited three times.

Examination of these data presents a profile of successful implementation. No ratings were assigned to the "very poor" or "poor" categories and only a minimal number were assigned to the "fair"category. In all areas assessed by the rating scale the majority of the ratings were in the "very good" or "excellent" categories. Further inspection of the data indicates that the majority of the ratings were in the "excellent" category for 19 of the 21 areas under assessment. Particular attention should be directed toward the following areas: suitability of materials, suitability of content, emotional climate, supervision and individualization, planning, follow-up, active involvement of the children, using a variety of grouping procedures, and active involvement of the educational assistant. In each of the previously listed areas the high percentage of "excellent" ratings indicates a smoothly functioning program which is meeting its stated objectives in qualitative terms. There were improvements in most ratings assigned in the interim report.

Product Evaluation

A pretest/posttest design was used to provide the quantitative anlaysis of the program. The participants were administered the Stanford Diagnostic

TABLE II

Ratings of the Diagnostic/Prescriptive Reading Program

Number of Observations = 52	Distribution of Ratings in %				
	5	4	3	2	1
1. Suitability of available materials/equipment, direct instruction and independent activities.	80	20			
2. Availability of materials/equipment, direct instruction and independent activities.	70	30			
3. Sufficiency of materials/equipment, direct instruction and independent activities.	75	25			
4. Emphasis is on development of concepts and understanding.	64	28	8		
5. Experiences of children are drawn on.	48	42	10		
6. Nature of subject matter content suitable for children in this program.	78	22			
7. Concepts and learnings are related to other areas of curriculum.	44	44	12		
8. Oral language and thinking are encouraged through questioning.	56	40	4		
9. Emotional climate.	82	18			
10. Independent groups and individuals are supervised.	88	12			
11. Activities appear well planned and organized.	72	28			
12. Provisions are made for follow-up to provide continuity.	82	18			

TABLE II - continued

	Distribution of Ratings in %				
	5	4	3	2	1
13. Attention given to individual children as well as to total group.	75	25			
14. Children participate actively in the lesson.	86	14			
15. A variety of grouping procedures are used.	75	25			
16. Independent activities are correlated with direct instruction in particular skill area.	72	28			
17. Prescription is based on adequate diagnosis.	75	25			
18. Educational Assistant is actively involved in the classroom.	70	20	10		
19. Record keeping is efficient and thorough.	62	34	4		
20. A variety of learning modalities and experiences are used.	60	28	12		
21. General rating or quality of activity observed.	70	30			

Scale: 5 = excellent; 4 - very good; 3 = fair; 2 = poor; 1 = very poor

Reading Test as the pretest in October 1978 and as the posttest in May 1979. Historical regression and Correlated "t" Tests were used to predict posttest scores based on the previous performance of the students and compare those predictions with actual performance.

The results of the Correlated "t" Tests are presented in Table III. Also presented in that table are: the participants by grade level; the pretest mean; the predicted posttest mean; and the actual posttest mean. Examination of the table indicates that at each grade level and for both of the subtests the actual posttest was higher than the predicted posttest. In addition, six of the ten cases yielded statistically significant results. These data support the conclusion that this program has achieved its goals.

TABLE III

Mean Pretest and Posttest Scores on the
Stanford Diagnostic Arithmetic Test, and the Correlated "t" Test

Grade	N	Pretest Mean	Predicted Posttest	Posttest Mean	"t"
		Auditory Vocabulary Subtest			
2	136	1.55	2.23	2.31	0.19
3	114	1.93	2.58	2.72	0.46
4	121	3.00	3.73	4.35	2.26*
5	93	3.60	4.36	4.84	2.09*
6	20	3.92	4.59	5.08	2.04*
		Comprehension Subtest			
2	136	1.29	1.94	2.14	0.62
3	114	1.96	2.62	2.78	0.51
4	121	3.04	3.80	4.27	2.16*
5	93	3.53	4.24	4.82	2.28*
6	20	3.80	4.47	4.91	2.11*

*Significant at the.05 level.

Program Strengths and Weaknesses

There were several program strengths which, in all probability, led to the results attained.

1. The extensive experimental base of the implementors of the program; including teachers, principals, and the District Coordinator.
2. Knowledge of the goals and methods presented in the original design.
3. The excellent use of individualization to meet specific needs.
4. The commitment of the personnel involved in the program as seen in their continuing professional development, their willingness to give extra time, and create additional materials for the program.
5. The clear lines of communication between administration and staff.
6. The use of games and manipulative materials.
7. The variety of learning activities using each of the learning modalities.
8. Encouraging children to borrow books for home reading. During each session observed in which the children were invited to borrow books. every child choose a book.
9. The use of creative writing as an alternative activity to stimulate creativity, vocabulary development, and self-expression.
10. Time was exceptionally well used with the children spending little time waiting and almost all of their time on their learning tasks.

There were no weaknesses observed in the program.

V. RECOMMENDATIONS

The program has unquestionably demonstrated its contribution to pupil achievement in reading and well merits recycling. The following recommendations are submitted for consideration by the Community School District.

1. The program should be expanded into the lower grades to preclude the development of negative attitudes toward reading and provide a more positive foundation for further growth in reading.
2. The program should also be expanded in the grades it is currently serving.
3. Improve communication within each school and between schools to disseminate successful activities and methods.
4. Continue the present staff at the discretion of the Superintendent.
5. Survey the personnel in the program in order to match the in-service training program with identified needs.
6. Reduce the amount of time children spend waiting for correction of work through the use of self-correcting and independent activities to reinforce the skills being studied.